ABSTRACT

The invention aims to provide a highly accurate automatic biopolymer determination technique utilizing mass spectrometry whereby calibration prior to measurement or the addition of an internal standard to a sample can be eliminated. The biopolymer automatic identifying method of the invention comprises: retrieving a candidate molecule by matching an observed mass value X obtained by mass spectrometry with a predetermined database; selecting an arbitrary number of candidate molecules with high similarity scores; calibrating the observed mass value X using the candidate molecule as an internal standard; calculating relative error Ec between a calibrated mass value Xc and a theoretical mass value M of the candidate molecule; determining the standard deviation S_{Ec} of the relative error; determining a tolerance Tc of database search from the standard deviation S_{Ec}; and repeating a database search based on the tolerance Tc.